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| 10/701,146 | 11/04/2003 | Frank C. Smith JR. | 50121 | 4832 |
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| EXAMINER | | | | |
| DINH, TEN QUANG | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,146

Applicant(s)

SMITH, FRANK C.

Examiner

Tien Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The applicant has claimed that the "large opening" is at least 4 feet high and 3 feet wide. However, there is no support for this whatsoever in the specification. Applicant has explained that applicant quantifies the large opening as 4 feet high and 3 feet wide because consideration of the size of a patient in a gurney, a man in a wheelchair and a motorcycle is taken into account. This is not a valid support for the opening of 4 feet high and 3 feet wide. Applicant should consider that motorcycles come in different shapes and sizes and that this is not valid support for a 4 feet high and 3 feet wide opening. The same applies to the man in the wheelchair and the "size of a patient in a gurney."

Claims 1 and 11 are misleading in that applicant claims that the canard has two and only two significant horizontal lifting surfaces, with a smaller lifting surface in front of a larger lifting surface. A canard is numbered 12 in applicant's drawing while a "larger lifting surface" or wing is numbered 14. The canard does NOT having a smaller lifting surface in front of a larger lifting surface. A canard is defined as "one of two small lifting wings located in front of the main

wings". This is on dictionary.com. Applicant seems to suggest that a canard encompasses both the smaller lifting surface and the larger lifting surface. This clearly is not correct. What applicant does have is a canard that is in front of a main wing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ratan 4641800 in view of Ratan ATTT.

Ratan discloses that canards with pitch control surfaces on an aircraft with no empennages and two significant horizontal surfaces are well known in the art. Ratan lacks the door at the rear of the fuselage. Ratan ATTT does teach using a door at the rear of the fuselage.

It would have been obvious to one skilled in the art at the time the invention was made to have used doors at the end of the fuselage in Ratan's system as taught by Ratan ATTT to easily load cargos and to increase maneuverability.

RE amended claims 1, 6, 11, the applicant has not provided any criticality of 4 feet by 3 feet opening or 5 feet high by 4 feet high and is merely a design choice. In fact, applicant has stated on page 3 line 29 of the specification that "10' x 5' x 4'" is not necessary to the design.

Applicant seems to admit that the dimension is a design choice. In addition, where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Accordingly Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396. Accordingly, since the applicant[s] have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement. The rear door of Rutan's aircraft as modified by Rutan ATTT does indeed allow "large" objects to be loaded through the "large opening", which in this case can be at least 4 feet by 3 feet.

Re claim 8, please note that the two engines 18 of Rutan are on the larger lifting surface.

Claims 2 and 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rutan 4641800 in view of Rutan ATTT as applied to claim 1 above, and further in view of Burnelli 1987050.

The examiner believes that Rutan has yaw control surfaces the larger lifting surface but in order to definitively show that yaw control surfaces on a larger lifting surface, the examiner brings forth Burnelli 1987050 to show that such claimed elements (number 14) are well known. Therefore, claims 2 and 12 are rejected by Rutan in view of Rutan ATTT and further in view of Burnelli. One skilled in the art would have used the yaw control surfaces for increased maneuverability.

Re claim 12, the power sources 18 and yaw control surfaces (as taught by Burnelli and used to modified Rutan's aircraft) on Rutan's aircraft are as forward as the larger lifting surface since they are on the larger lifting surface.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rutan 4641800 as modified by Rutan ATTT as applied to claim 1 above, and further in view of admitted prior art that successful testing of a canard aircraft with a single tractor engine that was witnessed.

Rutan 4641800 as modified by Rutan ATTT discloses all claimed parts except for the tractor engine. However, the admitted prior art that tractor engines are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used a tractor engine in Rutan 4641800's system as modified by Rutan ATTT and as taught by the admitted prior art to have the predictable result of more efficient thrust production.

Claims 1, 3, 5, 6, 9, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallis 2459099 in view of Rutan 4641800 and Weaver et al 2759691.

Wallis discloses an aircraft having wings 11-12 but without empennages but is silent on the opening at the rear of the fuselage and canards. However, Rutan '800 discloses that canards with pitch control surface are well known in this day and age. Weaver et al shows an opening 17 at the rear of the fuselage is well known.

It would have been obvious to one skilled in the art at the time invention was made to have used canards as well as openings at the rear in Wallis's system as taught by Rutan and Weaver et al to have a more maneuverable aircraft as well as easier loading and unloading.

As for the dimensions of at least 4 feet by 3 feet or 5 feet by 4 feet, it is a design choice for one skilled in the art to have made the openings any desired dimension to accommodate the desired payloads. Applicant has also not provided any criticality to these dimensions.

Re claim 5, Wallis's aircraft is a "light personal aircraft." If applicant is intending to claim that this aircraft is of a certain dimension, then applicant should claim those dimensions. In addition, a person skilled in the art would have found it obvious to have designed the aircraft

to have certain criteria would merely change the size of the components to achieve the desired criteria.

Claims 2, 4, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallis 2459099 in view of Rutan 4641800 and Weaver et al 2759691 as applied to claims 1 and 11 above, and further in view of Burnelli 1987050.

Wallis 2459099 in view of Rutan 4641800 and Weaver et al 2759691 discloses all claimed parts except for the yaw control surfaces on the larger lifting surfaces. However, Burnelli discloses yaw control surfaces 13, 14 on larger lifting surfaces are well known. It would have been obvious to one skilled in the art the time the invention was made to have used yaw control surfaces on the larger lifting surfaces of Wallis as modified by Rutan and Weaver and as taught by Burnelli to have yaw control and to increase maneuverability.

Re claim 12, please note that Burnelli discloses that the yaw control surfaces 13, 14 and power sources are attached as least as far forward as the larger lifting surface 2. It would have been obvious to one skilled in the art at the time the invention was made to have attached the power sources and yaw control surfaces as far forward as the larger lifting surface of Wallis as taught by Burnelli to have greater control and stability.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallis 2459099 in view of Rutan 4641800 and Weaver et al 2759691 and Burnelli 7987050 as applied to claims 1 and 2 above, and further in view of Sutton et al 2492245.

Wallis 2459099 in view of Rutan 4641800 and Weaver et al 2759691 and Burnelli discloses all claimed parts except for the two engines on the wing and the tractor engine. However, Sutton et al teaches that engines P that are on the wings as well as being tractor type are well known. See column 3, lines 31-33. It would have been obvious to one skilled in the art at the time the invention was made to have used engines on the wings that are tractor type in Wallis's system as taught by Sutton et al to provide more power to the aircraft.

Response to Arguments

Applicant argues that the Rutan '800 does not show an aircraft without empennages. The examiner respectfully disagrees. The examiner has reviewed column 4, lines 35-51 and strongly believes that applicant has misinterpreted this section. What Rutan is teaching is the total elimination of conventional empennages. He desired to use "Whitcomb-type" winglets instead. The winglets are not empennages. If applicant claims that winglets are empennages, then applicant's winglets 16 are empennages which contradict what applicant is claiming. It seems applicant argues that vertical fin 26 is an empennage. This is not correct. The vertical fin is located amidship. This is at the center of the aircraft and not the tail assembly. Applicant contends that the winglets and vertical fins are somehow a novel empennage is not correct.

Applicant has also argued that Rutan '800 is not a "personal aircraft." Applicant seems to be his own lexicographer by using the terms "personal aircraft". However, applicant can not be his own lexicographer when the terms he used have commonly accepted definition. Personal is defined as *of, pertaining to, or coming as from a particular person; individual; private.*" Hence, a personal aircraft is a "private aircraft." Applicant has mentioned that a personal aircraft is designed for six or less occupants and with a gross weight limit of 5000 pounds and a horsepower of less than or equal to 500 hp. Applicant argues that Rutan '800 therefore isn't a personal aircraft since it does not meet the terms above. First, the examiner believes that applicant has not provided any criticality to those numbers above. Second, it would have been an obvious matter of design choice to make the Rutan's aircraft be designed for six or less occupants and with a gross weight limit of 5000 pounds and a horsepower of less than or equal to 500 hp, since such modification would have involved a mere change in the size of the component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). Furthermore, if applicant merely mentions a personal aircraft in the preamble of the claims but has not claimed an aircraft that has six or less occupants and with a gross weight limit of 5000 pounds and a horsepower of less than or equal to 500 hp.

As for the arguments about the Rutan ATTT teaching a rear door on the fuselage, but only in conjunction with a three surface canard having a boom supported empennage, the examiner disagrees. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what

the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Concerning the affidavit from Mr. Wood, the examiner maintains that his opinion does not prove that combination of Rutan '800 and Rutan ATTT is not combinable. In addition, Mr. Wood's education is in electrical engineering and his opinion is not based on solid aerospace engineering principles.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Weiland and Hawley disclose aircrafts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 12-8.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mansen can be reached on 571-272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tien Dinh/
Primary Examiner, Art Unit 3644